



UNCLASSIFIED

BRIEFING NOTE TO THE DEPUTY MINISTER

LEAD IN DRINKING WATER INVESTIGATION

(For Information)

PURPOSE

- Following the recent investigation by Global News and other journalism partners on lead in drinking water, the purpose of this note is to provide background information on the issue and the potential for funding support from Infrastructure Canada to help address aspects of the challenge.

HIGHLIGHTS

- The investigation was undertaken by more than 120 journalists from nine universities and 10 media organizations, including Global News and Concordia University's Institute for Investigative Journalism. The main finding from the investigation was that lead contamination continues to be an issue across Canada, but the full extent of the issue is unknown. (See **Annexes A and B** for Global News stories)
 - The investigation found that of 12,000 tests in cities across Canada, one-third of those tests exceeded federal lead guidelines.
 - This finding is consistent with the 2017 *Lead in Drinking Water* report by the Parliamentary Standing Committee on Transport, Infrastructure and Communities which found that while the extent of challenge was unknown, over 500,000 Canadian homes could have lead contaminated water.
- Infrastructure Canada was not directly implicated in the investigative findings; however, they suggest that the federal government shares some responsibility for this problem by not having enforceable federal guidelines on lead in drinking water. Health Canada is responsible for developing the federal guidelines on safe levels of lead in the *Guidelines for Canadian Drinking Water Quality*. These guidelines are voluntarily adopted and enforced by provinces and territories.
- Infrastructure Canada provides ongoing funding support for public infrastructure projects which can include the replacement of public lead service lines (as opposed the replacement of lead pipes on private residential properties), corrosion control infrastructure, and other upgrades to public drinking water systems to manage the challenge of legacy lead pipes and fittings.

- A search of project records suggests that, since 2002, Infrastructure Canada has invested in 2,793 drinking water projects representing \$2.6 billion in Infrastructure Canada funding.
- Of those projects, at least 190 projects were to address lead issues, representing \$14.6 million in Infrastructure Canada funding. All but three of the identified projects were in Ontario, almost all in Toronto.
- Infrastructure Canada is not directly accountable for the quality of water service lines or water treatment. It is the responsibility of provinces, territories, and municipal governments to maintain the quality of their drinking water systems.

KEY BACKGROUND

Government Response to the 2017 *Lead in Drinking Water* Report

- In December 2017, the federal government published a *Government Response* to the *Lead in Drinking Water* report of the Parliamentary Standing Committee on Transport, Infrastructure and Communities. The *Response* was led by Infrastructure Canada in collaboration with Health Canada, Indigenous Services Canada, and Canada Mortgage and Housing Corporation. (The Committee report is at **Annex C** and the Government Response at **Annex D**)
- This response recommended three key measures, the first of which directly implicated Infrastructure Canada:
 - Recommended Measure 1: Working with the Office of Infrastructure Canada and other partners to identify potential sources of funding for provinces and municipalities to address their specific corrosion control and lead piping replacement challenges.
 - In the Government Response, Infrastructure Canada committed to support provinces, territories, and municipalities by continuing to provide funding which could be used for public lead pipe replacement and corrosion control projects.
 - Recommended Measure 2: Working with First Nations communities to address their specific corrosion control and lead piping replacement challenges.
 - In the Government Response, Indigenous Services Canada noted its support First Nations in providing safe drinking water through funding for community infrastructure and public health activities is part of its core mandate.

- Recommended Measure 3: Working with the provinces, territories and municipalities to harmonize the implementation of Health Canada's lead guidelines and testing protocols across Canada.
 - In the Government Response, Health Canada committed to supporting provinces and territories as they adopt and implement the updated Guideline for Canadian Drinking Water Quality for lead.
- As a result, in July 2018, Infrastructure Canada organized a multilateral call with provinces, territories, Health Canada, Indigenous Services Canada, and Canada Mortgage and Housing Corporation to explain how existing federal funding and programs could help address lead in drinking water (see **Annex E** for the briefing deck used to support the call). Infrastructure Canada also organized a teleconference with the Federation of Canadian Municipalities in August 2018 to explain how existing funding and programs could support this issue.
- Infrastructure Canada continues to make up to \$5.1 billion in funding available over the next decade for environmental quality projects, which can include public lead pipe replacement and infrastructure-related measures to control lead uptake in drinking water, through the Investing in Canada Infrastructure Program's Green Stream.

Addressing Lead in Drinking Water

- Lead contamination can be addressed by replacing lead pipes, or by implementing corrosion control infrastructure (to reduce the amount of lead corroding into tap water from lead service lines); both of which Infrastructure Canada funds (for public assets). Infrastructure Canada does not fund private pipes that connect a home to the public service line.
- Barriers to addressing this problem include jurisdictional issues, insufficient data, and capital costs:
 - Shared ownership of pipes between homeowners and municipalities raises questions about the authority to act and liability for costs.
 - In some locations, like Nova Scotia, privately owned systems, like wells, fare worse than publicly owned systems and make up the majority of lead contamination incidents. In some jurisdictions there are no requirements for private owners to test their water quality.
 - There is no comprehensive national inventory of lead pipes. This is a result of incomplete or lost records, and of poor asset management practices.

- Costs to replace lead pipes are typically \$5,000 for the private portion and \$10,000 for the public portion. If 500,000 homes are affected, this would lead an estimated cost of \$2.5 billion for homeowners, and \$5 billion for public owners. Some municipalities have taken steps to share costs with homeowners; however, uptake is limited due to high capital costs and lack of awareness by homeowners.


Gerard Peets
Assistant Deputy Minister
Policy & Results Branch

Nov. 7/19
Date

Attachments:

- Annex A – Global News - Is Canada's tap water safe?
- Annex B – Global News - Drinking Water Investigation Spurs Calls for Action
- Annex C – TRAN Committee Report on Lead in Drinking Water
- Annex D – Government Response to the Lead in Drinking Water Report
- Annex E – Federal Support for Lead Pipe Replacement and Corrosion Control

Published: 2019-11-04 15:32 (EST)
Received: 2019-11-04 15:38 (EST)

Global News
Words: 2,701

Is Canada's tap water safe? Thousands of test results show high lead levels across the country

By: GLOBAL NEWS, TORONTO STAR AND INSTITUTE FOR INVESTIGATIVE JOURNALISM

Hundreds of thousands of Canadians could be consuming tap water laced with high levels of lead leaching from aging infrastructure and plumbing, a large collection of [newly released data and documents](#) reveals.

It's a key conclusion of a year-long investigation by more than 120 journalists from nine universities and 10 media organizations, including Global News and Concordia University's Institute for Investigative Journalism.

While the water generally contains no lead when it leaves municipal treatment plants, the main sources of the contamination are lead service lines — the pipes that connect homes and apartment buildings with eight dwellings or less to water mains — as well as plumbing fixtures that contain lead and lead solder.

Many cities said that some of the hundreds of thousands of lead pipes underground would likely not be replaced for decades. In addition, the cities also said it was difficult to co-ordinate replacements since they

The journalists collected test results that measured lead content in tap water in 11 cities. Out of 12,000 tests conducted by cities since 2014, one-third — 33 per cent — exceeded the national safety guideline of five parts per billion (ppb).

In response to questions from Global News and its partners, many municipalities admitted they didn't even know how many lead service lines are within their city limits, due to inadequate record-keeping and the lack of requirement for some municipalities to conduct tests.

A federal parliamentary committee recently [stated in a December 2017 report](#) that at least 500,000 homes across Canada were being serviced by antiquated lead pipes.

In addition, the journalists working on this investigation interviewed nearly 1,000 people and filed more than 700 requests through freedom-of-information legislation to get access to the thousands of municipal water sample test results, which were never previously posted publicly. These add up to a collection of about 79,000 results since 2004.

"I'm shocked, I'm disappointed, I'm angry," says Michèle Prevost, a Quebec engineering professor who advises governments around the world about drinking water.

"The one thing that's really missing across Canada is transparency."

With the help of residents who volunteered to take part, the journalists collected water tests from 260 older homes across the country, using accepted standards and submitted samples to accredited labs. The results showed 39 per cent of samples had lead levels that exceeded the current Health Canada guideline of five ppb.

Test results from samples taken in cities including Montreal, Regina, Saskatoon, Moose Jaw and Prince Rupert, B.C., for example, showed lead levels comparable to — or even beyond — those of U.S. cities that have made international headlines for their tainted water.

"I'm surprised," said Bruce Lanphear, a leading Canadian drinking water researcher who reviewed Canadian lead levels obtained by the investigation.

"These are quite high given the kind of attention that has been given to Flint, Michigan, as having such extreme problems. Even when I compare this to some of the other hotspots in the United States, like Newark, like Pittsburgh, the levels here are quite high."

Historically, Toronto's lead levels were among the highest in Canada — with as many as half of tests exceeding the provincial lead standard in 2008. The city began adding a non-toxic substance called orthophosphate to the water in 2014 to control corrosion.

The plan initially cost \$9 million to implement and about \$3 million per year to pursue since then. Today, less than two per cent of samples exceed the standard. The process also generates savings as it extends the life of homeowners' pipes, according to Marc Edwards, a professor of environmental and civil engineering at Virginia Tech who helped expose the water crisis in Flint, Mich., in 2015.

"Generally speaking, corrosion control is thought to save about \$10 for every dollar you spend on it," Edwards said.

Although the federal government sets national guidelines, in collaboration with other levels of government, it has historically allowed the provinces to set and enforce their own drinking water and standards across the country.

As a result, cities conduct lead tests in different ways. One popular method is heavily criticized for failing to provide accurate real-time results. And when problems are identified, only one province, Ontario, has a regulation that compels municipalities to treat water.

Among the investigation's other findings:

Quebec

[Across Quebec](#), municipal workers have traditionally flushed pipes for five minutes before collecting samples — a method criticized as irresponsible because it under-represents lead levels. The Quebec government announced changes to that policy after reviewing data reported on Oct. 16 by Global News and its partners, [revealing that many households](#) in close to 100 cities across the province were exposed to dangerous levels of lead from their taps.

[Montreal Mayor Valérie Plante](#) also told Global News and Le Devoir in an interview that her city would start removing lead pipes, both on the public and private side of property lines. The city said it would spend over \$500 million to pay for the public portion of the pipes, while sending a bill worth thousands of dollars for the remainder of the replacement to owners to reimburse over 15 years. The city has also estimated that nearly 300,000 people in the city may be affected by lead-tainted water and has created a new online map that allows people to search for their address to see if they are affected.

Montreal's mayor says she's dealing with a contaminated lead issue at home

Prairies

High municipal lead measurements were registered in Saskatchewan and Alberta where there is no mandatory public posting of lead test results. [Thirty per cent of Edmonton](#) lead tests show exceedances of the federal guideline including a result of 428 ppb in 2017 — 86 times the federal guideline. And in [Moose Jaw, Regina and Saskatoon](#), homes fed by municipal lead service lines averaged 22 ppb between 2013 and 2018 — four times the national guideline.

[The City of Calgary](#) also told reporters it estimated having only 550 lead service lines on the public side of property lines, but that it didn't know the location of all of the lead service lines on the private side of properties. The provincial government introduced a new policy in September that requires water utility companies to report their test results to the provincial government, something they weren't required to do before. EPCOR, the utility company that serves Edmonton, told Global News that it doesn't yet have details of what type of information the government wants to collect.

Edmonton resident Kathy Davis underwent a heavy metals test after treatments for her hypothyroidism failed to work. (Mackenzie Lad/IIJ) (*Mackenzie Lad/IIJ*)

Nova Scotia

[In Nova Scotia](#), where about half the province draws drinking water from private wells, property owners are responsible for testing but are not compelled to do so. Thirty years ago, a study found 29 per cent of private wells in Hackett's Cove exceeded the guideline, which was then 50 ppb. Little has changed. Samples collected by journalism students from King's College at homes tested as high as 80 ppb.

In Halifax, the city's test data shows nearly a third of tests taken at homes over the past several years have exceeded the federal lead guideline. These results, however, reflect a method of testing water after it has been sitting for several hours in lead pipes and would not reflect the lead levels that would be present in a typical household during the day.

Ontario

In Ontario, government data posted online shows 919 lead exceedances of the federal guideline of five ppb in lead tests at the tap over the past two years.

Exceedance rates reach as high as 50 per cent in some municipalities. In London, half of the 36 tests conducted last year exceeded the guideline. Windsor had the highest number of exceedances at 289 — a quarter of tests conducted over the past two years. Tests in the town of Terrace Bay on the north shore of Lake Superior exceeded national standards nearly 21 per cent of the time.

Many water systems across the province didn't test for lead at all in the past two years. Of the province's approximately 660 municipal water systems, only 123 — one in five — posted results of tests taken at homes during the past two years. Of those, 42 per cent had exceedances.

British Columbia

B.C. Health Minister says lead contamination a 'significant' issue with older homes

In Prince Rupert, B.C., 21 of the 25 homes tested by reporters exceeded Health Canada's guidelines for lead, including for residents who said they were drinking the water or using it for cooking. Results reached as high as 70 ppb.

One sample collected by UBC journalism students from Leona Peterson's kitchen faucet last December, for example, registered 15.6 ppb — three times the guideline. Peterson and her son had always drank from the tap without any knowledge of lead in the water, she said. She even used tap water to feed him as a newborn. Now, she feels betrayed.

"I contaminated the hell out of him," she says. "Being a single mom that has to worry on a daily basis about water...just feels really pathetic...Is this Canada? Are we living in Canada?"

B.C. Health Minister Adrian Dix said that officials have known for some time that Prince Rupert's acidic water raises the risk of unsafe water, but that they are investing money to improve water treatment and help protect public health.

Health Canada and the World Health Organization agree there is no safe level of lead. In Canada, it has been banned in paint and gasoline, tin cans and toys. Today, drinking water and food are the leading source of lead for Canadians.

Lead pipes were banned from use in new construction in 1975, when the national building code was amended. But lead service lines owned by municipalities continue to feed water into residences and businesses and there is no comprehensive inventory.

Similarly, the number of Canadian homes that have lead plumbing is unknown. Homes built before 1975 are particularly vulnerable, although lead solder was used on pipes until 1986. Plumbing fixtures such as bronze and brass taps were another source of lead until 2013, when federal regulations changed.

"Imagine drinking the water through a ... 30-foot long lead straw," says Edwards, the engineering professor from Virginia Tech.

"Sometimes that water comes through it OK, but every now and then a chunk of lead falls off into the water. If it's water you use for cooking or drinking, it can have real serious health consequences."

Experts call threats from lead exposure a simmering public health crisis.

A single glass of water highly tainted with lead can elevate a child's blood lead level to require hospitalization, he says.

In March, when Health Canada cut the guideline for acceptable lead levels in drinking water in half — to five ppb from 10 ppb — it noted that reduction in IQ can occur even at concentrations as low as five ppb. At high levels of exposure, lead can damage the prefrontal cortex, contribute to anti-social behaviour and behavioural problems in children, cause prenatal growth abnormalities and is an established risk factor for hypertension, chronic kidney disease and tremors in adults.

More than 400,000 deaths are attributable to lead exposure — from all sources — every year in the U.S., according to a 2018 study co-authored by Lanphear, and published in the Lancet.

"[Lead] has been linked with not only IQ deficits in children, but spontaneous abortion and miscarriage in women, pre-term birth in women, hypertension in adults, premature deaths from cardiovascular disease in adults," Lanphear said in an interview.

"It's clearly a major public health problem, even if it's an insidious one."

There are also economic impacts. A 2013 Health Canada risk management strategy predicted an economic benefit of more than \$9 billion a year "if the exposure of Canadian children to lead could be eliminated." It factored the number of children exposed each year and the impact on intellectual development and lifetime earnings.

Lanphear, who is also a professor of health sciences at Simon Fraser University, said that Canada could reduce cases of illnesses such as hypertension and coronary heart disease if it focused on reducing lead exposure, which is a major risk factor. He noted that cases of both illnesses dropped dramatically in recent decades in North America after companies stopped using them in both gasoline and paint.

"I don't want citizens to be worried": Montreal Mayor Valerie Plante insists water is safe to drink But he said more could be done to reduce the amount of money that people are still spending on medication to treat these illnesses.

"If you took a poll of Canadians and you gave them an option, would you rather never have hypertension and coronary heart disease, or would you rather rely on an expensive drug to solve the problem once you already have it?" he asked.

"My guess is the majority of Canadians would rather never had had it in the first place. Not only is it expensive, there's all these side effects."

Montreal public health official says tap water 'remains the healthiest choice'

Yet lead in drinking water persists as a public health crisis in Canada, enabled by a patchwork of policies and few mandated protocols governing testing.

The federal government can provide infrastructure funding and Health Canada can set national guidelines, but they are not enforcing these guidelines. The management, treatment and distribution of drinking water fall to the provinces, while the day-to-day, hands-on functions of water systems fall to the municipalities.

That lack of federal oversight is in stark contrast to the United States, where the Environmental Protection Agency imposes legal standards for testing and public disclosure, including an annual Consumer Confidence Report provided by water utilities to homeowners that details lead test results.

In Canada, there are no federally-mandated control methods, lead pipe removal requirements or lead test protocols. Health Canada recommends lead testing at residential taps, but B.C. and Alberta don't require municipalities to do so. During consultations with Health Canada about the new guideline, many provinces lamented the high cost of testing at residential taps and in schools. Manitoba said testing would be a "significant burden" and Yukon noted that "it is not possible to quantify any potential impact...due to a lack of exposure data."

Montreal previously set a goal of removing tens of thousands of lead pipes in the city by 2026 but announced in October that it was pushing that target back to 2030.

In Ontario, the 919 lead exceedances of the federal guideline over the past two years reflect the hundreds of thousands of lead lines feeding homes and businesses across the province.

Water officials across Ontario agree on the need to get the lead out. But they repeatedly told reporters that municipalities are many years — or decades — away from being able to pay for it.

Even if municipalities did have the means to aggressively remove lead lines, most wouldn't even know where to start digging. There is no provincial or federal inventory of lead lines.

Reporters surveyed 50 Ontario municipalities and half reported they could not provide an estimate of how many lead pipes — on public and private property — are feeding homes. In other cases, water officials offered broad guesses.

"Very difficult to estimate — perhaps 10,000 [lead lines on private property]," wrote London water quality manager Huggins.

Port Colborne environmental compliance supervisor Darlene Suddard wrote: "We are not required to know [the number of remaining lead pipes]."

Ryan Peterson, chief operator of the Kenora Water Treatment plant, wrote: "We are aware of a few private lead services but it is possible that there are more we are not aware of."

Sixteen municipalities provided estimates totalling more than 180,000 lead lines delivering water to homes and buildings. An estimated 30,000 of these lead lines are in Toronto, but the records providing their locations are among tens of thousands of paper documents that cannot be easily searched, officials said.

"I think that one of the takeaways from this investigation is that here we are relying on journalists to do public health work," Lanphear, from SFU, said.

"And isn't this unusual. We see the same thing in the 'States. Is it because there's not enough resources? Well, if that's the case, we need to find ways to increase the funding so that public health officers or environmental health officers can do their job."

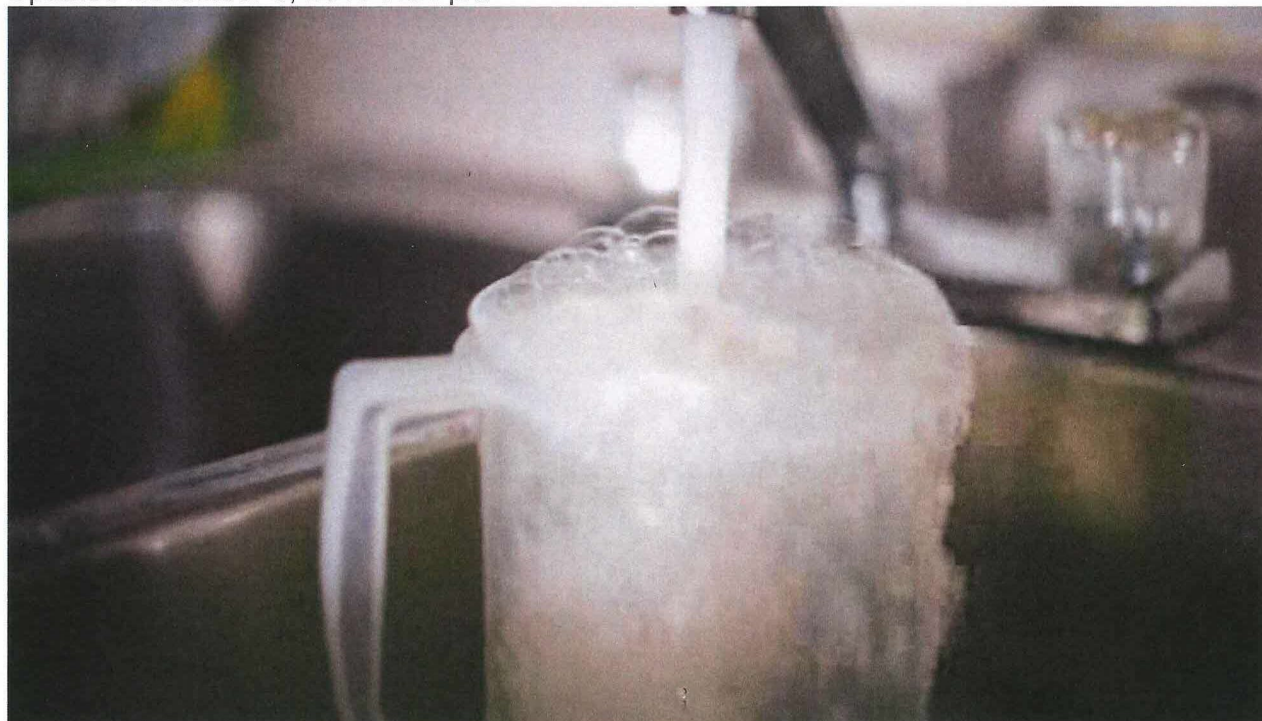
CANADA

Investigation into lead in Canada's drinking water spurs calls for action across country

BY ANDREW RUSSELL, MEGAN ROBINSON, ELIZABETH MCSHEFFREY GLOBAL NEWS AND AND JENNIFER ACKERMAN THE REGINA LEADER-POST GLOBAL NEWS

Posted November 5, 2019 5:07 pm

Updated November 6, 2019 7:04 pm



WATCH: An investigation conducted with journalists from nine universities, 10 media outlets - including Global News - and the Institute of Investigative Journalism, involved knocking on the doors of 260 homes across Canada to check how safe their water is. The findings revealed 39 per cent of homes were tainted by lead that exceeded maximum levels deemed safe by Health Canada. Heather Yourex-West reports.

Across the country, politicians of all stripes are responding to a [massive, year-long investigation](#) that found hundreds of thousands of Canadians could be consuming tap water laced with high levels of lead.

Federal opposition parties called on Prime Minister Justin Trudeau's government to take a stronger leadership role to help municipalities address the issue of

removing lead service lines — pipes connecting homes and apartment buildings to water mains — that are the main sources of lead contamination.

“This is shocking, but unfortunately not surprising with the lack of funding for municipalities to update their aging infrastructure from past Conservative and Liberal governments,” said NDP leader Jagmeet Singh.

“This situation is not normal and Trudeau’s Liberals must play a role of leadership and must work with provinces and municipalities to fix it.”

Matt Jeneroux, Conservative infrastructure critic, said that Trudeau’s government needs to work with provincial governments and territories to tackle the underlying infrastructure issues.

“All Canadians deserve access to clean drinking water,” Jeneroux said.

“Trudeau’s failure to work with provinces and territories has delayed critical infrastructure projects such as roads, bridges and vital water and wastewater projects from getting funded and built.”

The investigation by more than 120 journalists from nine universities and 10 media organizations, including Global News, the Toronto Star and the Institute for Investigative Journalism at Concordia University in Montreal, collected test results that measured exposure to lead in 11 cities.

Out of 12,000 tests since 2014, one-third — 33 per cent — exceeded the national safety guideline of five parts per billion (ppb).

Reporters also found that children in thousands of schools and daycares across Canada are likely being exposed to dangerous levels of lead in their drinking water and don’t know it, according to provincial studies and internal briefing materials obtained under freedom of information legislation.

Federal Health Minister Ginette Petitpas Taylor declined a request for an interview. She said in a statement that “Canadians can continue to have confidence in the water they drink” and pointed to Health Canada’s decision to cut the guideline for acceptable lead levels in drinking water in half — to five ppb from 10 ppb.

"Water management in Canada is a shared responsibility, with provinces handling management, treatment and distribution and municipalities taking care of day-to-day operations. This means that provinces are mostly responsible for implementing these new guidelines, and fully meeting them may take time."

Here's how provincial governments have responded to the findings of the investigation:

Alberta

NDP MLA Marlin Schmidt called on Premier Jason Kenney's UCP government to order a provincial review into the safety of drinking water during an exchange in question period at the Alberta legislature on Tuesday.

"In Calgary, the results were shocking," Schmidt said as he directed his question to Environment Minister Jason Nixon. "In Edmonton, three out of every 10 test results exceeded the federal guideline for lead in drinking water, and some results were as high as 120 times the limit. In Calgary, some tests reported levels of lead that were nearly four times the federally accepted limit."

Nixon replied by saying his government is "happy to have adopted the federal standards, starting in January."

"Our government will continue to work with municipalities and homeowners, schools and other areas that have water that we're concerned about, Mr Speaker, to be able to move forward in a productive way, as set out the federal guidelines," he said.

"We have a plan to do that. That's the direction that our government will be headed in."

Schmidt then directly asked Nixon if he could be more specific about the government's plans, noting that "the cost of replacing lead service lines and Edmonton is only \$14 million (and) the cost of replacing the lines in Calgary is \$11 million, a fraction of their \$4.7-billion handout to the corporations."

Nixon replied by reiterating his previous statement. Schmidt then asked Nixon if he would "commit today to banning plumbing fixtures containing lead," and Nixon reiterated his initial reply for a third time.

On Wednesday, Nixon was again asked about the NDP's calls for a review to look further into the issue.

"I don't know what the value of that would be," he said. "The NDP, over half a year ago, was in government and were aware of these numbers.

"As we went through the process, they didn't see a need for a public inquiry. I think our time in government is better spent making sure we move forward in a productive way to be able to deal with the issue."

Nixon also said he did not have specific dates for when and how the province will do public posting of residential lead test results.

Allison Purcell-Pike, the president of the Alberta School Councils' Association, said the investigation by Global News and its partners was concerning.

"It's definitely concerning for parents to know that there may not be safe learning environments that our students are in," she said. "Parents across the province definitely do want to ensure students are in safe learning environments."

Purcell-Pike said the association does not have a policy for mandatory lead testing in schools but is leaning on the province to take action.

"We do want to ensure there are provincial standards, that it is not left up to local school boards to be making local policies," she said.

"When we see provincial standards, then we know that no matter what community you live in, you can have the same expectations across the province."

In a joint letter sent to school board chairs and superintendents in Alberta on Tuesday, Health Minister Tyler Shandro and Education Minister Adriana LaGrange acknowledged "there have been recent concerns circulating in the media with regards to lead health risks in schools."

"The health and safety of Alberta's children is of the utmost importance," the letter reads in part. "While any cases are few and far between, and many school divisions acted years ago, we are writing to remind you that Alberta Health Services stands ready to support school divisions should they wish to test lead concentrations in water sources.

"We look forward to continued collaboration and appreciate your efforts on this issue."

On Monday, Edmonton Mayor Iveson answered with a simple "no" at first when asked if he had any concerns about the city's water quality.

"EPCOR's board and management report to us regularly," he elaborated. "I think they've taken a very proactive approach to it and are prepared to help support homeowners who do have concerns with filtration and other things.

"Recognizing that the pipes need to change over time, and there is work to do. I have full confidence in the water supply and the integrity of it in our city."

EPCOR had responded to the investigation initially, saying that there are about 4,450 homes in Edmonton with private lead lines, and another 23,000 with lead plumbing or fixtures. The agency also said it always notifies customers of lead test results.

EPCOR added that it offers free water tests for households with lead water pipes and will provide free filters or replace the entire line if needed.

In the wake of the investigation, city councillors in Calgary have asked that city's water resources department to look into the issue and submit a report to council on the problem early in the new year so councillors can consider the best way to move forward on it.

"We kind of felt smug about Flint, Mich., and how our water is so pristine," Coun. Druh Farrell told Global News on Tuesday. "It's a fairly small problem compared to other cities... but it must be addressed.

“From what I understand, it’s about an \$11-million cost to address it, which is something that we can afford.”

Farrell added that she believes council has a responsibility to act on the issue because it concerns public safety.

Ontario

Official Opposition Leader Andrea Horwath slammed Premier Doug Ford’s government after the reporting found 2,400 Ontario schools and daycares exceeded the current federal guideline for lead in drinking water — five ppb — in the past two years.

Around two dozen schools and daycares across Ontario reported samples higher than 1,000 ppb — a level experts say can immediately impact blood-lead levels in a child. Although the data is available on a provincial website, students, parents and teachers are not warned directly.

“It’s certainly frightening, for any parents who are watching this unfold about the quality of drinking water and the lead contamination that exists to varying levels at various schools,” Horwath said.

“The troubling piece is that this minister doesn’t think he has any responsibility to let parents know what is happening in schools and child care centres.”

Ontario Environment Minister Jeff Yurek said his office is reviewing whether to lower Ontario’s lead threshold from 10 parts per billion (ppb) to meet the current federal guideline.

“At the end of day I want to reiterate we have safe drinking water in the province of Ontario,” Yurek told reporters. “It’s one of the most robust reporting systems in the country.”

“Parents can go to the school and request the records of their water testing,” he said, adding the school boards should be responsible for relaying information about water tests to parents.

In Toronto, city councillor Anthony Peruzza said he would ask Toronto Public Health to immediately post all testing results related to drinking water on the city's website.

"The news reports are worrisome," he said in a statement. "It's important that our city takes the lead to make sure that our water is safe for Torontonians to use."

Mayor John Tory reiterated that city's water is safe and undergoes constant testing.

"We have given the advice to people in areas where there has been even a hint of a problem that they simply run the water for few seconds before using it. It's going to virtually guarantee that the levels are negligible," he told reporters Monday.

"But we've got to keep working on this by replacing the pipes that are ours and by encouraging city residents to replace their own pipes."

Quebec

The Quebec government announced policy changes in October after reviewing data reported by Global News and its partners, revealing that many households in close to 100 cities across the province were exposed to dangerous levels of lead from their taps.

Premier François Legault said his government is planning to change how it tests drinking water following the results of the investigation. Currently, Quebec's testing method requires flushing out taps for five minutes before taking a sample, which means it won't accurately capture lead that has collected overnight in pipes that could be consumed by households when they turn on their taps in the morning.

"It doesn't seem to me like it should be this complicated to do the [right] test," Legault said Oct. 16.

"[Quebec Health Minister] Danielle McCann will ensure that municipalities everywhere will do tests correctly... as Health Canada recommends."

Montreal Mayor Valérie Plante said her city would start removing lead pipes, both on the public and private side of property lines.

"Ultimately it's not about the water, it's about the water pipes which carries the lead," Plante said.

"We have made a decision at the city of Montreal to take responsibility for the private part of the lead service lines."

The city said it would spend over \$500 million to pay for the public portion of the pipes while sending a bill worth thousands of dollars for the remainder of the replacement to owners to reimburse over 15 years.

Nova Scotia

Opposition leaders in Nova Scotia called on the government to act on reducing the risk of lead [exposure in private wells](#).

The NDP said the government should be providing well water tests for all Nova Scotians. A comprehensive test can cost \$200.

"The real question is, is this a legitimate call on the public resources of the people of Nova Scotia," Gary Burrill said. "In our view, the answer is yes. This is a public health issue."

PC Leader Tim Houston said the province should do a better job of tracking well-testing data.

"I think that would be a good use for technology and keeping a database," he said. "And just reaching out to homeowners to say, look, the well at this home hasn't been tested since whatever day."

Environment Minister Gordon Wilson declined to comment on the investigation but said the Liberal government takes the quality of drinking water seriously and encouraged residents to test their wells every two years.

Saskatchewan

The NDP in Saskatchewan is calling for a provincial review after the [investigation released Monday](#) showed drinking water from some Regina, Saskatoon, and

Moose Jaw homes were among the highest levels of lead-tainted water in the country.

"The levels of lead that were exposed in this report are really troubling," NDP municipal relations critic Trent Wotherspoon said in the Saskatchewan legislature Monday.

"I think right now we need a full assessment in a very urgent way, a true picture of what we're dealing with by way of the levels of lead within the water and what the sources of that lead is and then to work in partnership with municipalities to make sure that we have safe drinking water," he urged.

Minister of Highways and Infrastructure Greg Ottenbreit dismissed the evidence gathered by Global News and its partners. Instead, he emphasized Saskatchewan water sources are safe and pointed the finger at municipalities and property owners.

"Over the years we've increased municipal revenue sharing with municipalities to make sure that they can have flexible funding that they can address issues like this," said Ottenbreit.

He added that the Water Security Agency works closely with municipalities to monitor lead levels in water, but that it's up to municipalities to address such issues.

Asked if the province would do more to help cities tackle the lead issue, he said not at this time.

In response to the investigation, the City of Regina says it's reviewing its Lead Service Connections program to make improvements. The city currently sends out letters to residents who have a city-owned lead service line, offering free water testing and filters for up to one year.

Pat Wilson, Regina's director of water, waste and environmental services, said calls related to lead pipe concerns flooded the city on Monday after the investigative report came out.

"We are hoping that this story will help to bring some focus to it and we will see more residents call us," Wilson said. "We are going to be continuing to add elements to our program as we go through — we come to council every year."

–With files from Global News' Katelyn Wilson, Phil Heidenreich and Allison Bench

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LEAD IN DRINKING WATER

INTRODUCTION

On 7 February 2017, the House of Commons adopted a motion asking the Standing Committee on Transport, Infrastructure and Communities (hereinafter “the Committee”) to undertake a study on the presence of lead in Canadian tap water. The Committee devoted five meetings to the [study](#), heard from nineteen witnesses and received two written briefs.

ENVIRONMENTAL LEAD EXPOSURE

Lead was once commonly found in many industrial and consumer products including paint, tin cans, lead crystal glassware, gasoline and, of course, lead piping. However, as scientific understanding of lead toxicity has improved, the federal government has taken steps to reduce Canadians’ exposure to lead: for example, the 1990 [Gasoline Regulations](#) resulted in the elimination of leaded gasoline while the [Food and Drugs Act](#) has ensured that the lead content in food and food packaging materials, such as tin cans, is controlled. Nevertheless, while the [National Plumbing Code](#) has restricted the use of lead in pipes since 1975 (and in solder since 1986) lead in drinking water remains a persistent problem.

Although no comprehensive national inventory of lead piping exists, witnesses [told](#) the Committee that it would not be unreasonable to assume that around 500,000 Canadian homes still have lead service lines. In addition, lead is known to enter the water supply through lead solder in plumbing, lead in brass fittings (e.g., faucets) and lead liners in water fountains. While some municipalities have taken steps to replace lead service pipes, Mr. Bruce Lamphear (Simon Fraser University) [explained](#) that water pipes and water fountains remain “an important source” of lead for many Canadians, especially those in smaller and First Nations communities.

A PUBLIC HEALTH CONCERN

Witnesses unanimously considered lead in drinking water to be a public health issue, and several provided compelling testimony as to the many and diverse effects of lead exposure on human health. Mr. Lamphear [noted](#) that there is no safe level of lead in children’s blood and explained its adverse effects as follows:

At high levels of exposure, we found that lead damages the prefrontal cortex. It elevates the risk that children will develop anti-social behaviours like delinquency and even



criminal behaviours. We also found that children who were exposed to high levels of lead were at increased risk for developing other types of behavioural problems like ADHD.

While children are considered to be most at risk from the effects of lead exceedances, Mr. Lanphear [explained](#) that lead is also an established risk factor for hypertension, chronic kidney disease and essential tremors (a nerve disorder characterized by uncontrollable shaking or tremors) in adults. Moreover, Mr. Marc Edwards (Virginia Polytechnic Institute and State University) [informed](#) the Committee that links have now been established between aging pipe infrastructure and the growth of “opportunistic premise plumbing pathogens,” such as *Legionella* bacteria.

In light of these concerns, witnesses favoured removing lead service lines from Canadian communities.

BARRIERS TO REMOVING LEAD SERVICE LINES

Although municipalities and expert witnesses expressed support for lead line replacement, they informed the Committee that certain barriers currently undermine efforts to address the problem.

Jurisdictional Complexities

While the federal government has certain responsibilities relating to health and infrastructure, the management of drinking water treatment and distribution falls within provincial jurisdiction and is most often managed by a municipal water authority in urban areas (Government of Canada, [Water governance and legislation: shared responsibility](#)). Furthermore, as several witnesses [noted](#), water utilities are typically responsible only for the pipes that run from the water main to the property line, while homeowners are responsible for the remaining part of the service line.

Shared jurisdiction and shared ownership raise questions as to authority to act and liability for costs. For example, officials from the Office of Infrastructure of Canada [explained](#) that, while their department has several funding streams through which projects for water and waste-water public infrastructure can receive support, it is not mandated to fund projects relating to pipes on private property.

That said, several witnesses stressed the importance of ensuring that both the privately-owned and municipally-owned sections of a lead pipe are replaced. Witnesses, including Ms. Bernadette Conant (Canadian Water Network) and Mr. Graham Gagnon (Dalhousie University), [told](#) the Committee that replacing only the municipally-owned section of the pipe can aggravate the problem of lead exceedances, at least in the short term. This can

be explained by several factors, among them the release of particles and debris that is triggered when the formerly continuous pipe is cut to allow the municipal section to be replaced.

In view of these concerns, witnesses unanimously agreed that cooperation between all levels of government, and between government and homeowners, is essential.

Insufficient Data

The Committee heard that there is no comprehensive inventory of lead service lines in Canada. Witnesses identified a number of factors that contribute to this dearth of data: for example, Mr. Gagnon and Ms. Michèle Grenier (Ontario Water Works Association) explained that some records from early last century have been lost, while other more recent records are incomplete.

That said, Mr. Carl Yates (Halifax Water) noted that both the American Water Works Association and Halifax Water have identified inventory as a key issue that should be addressed. In a similar vein, Mr. Alain Desruisseaux (Office of Infrastructure of Canada) recognised that more needs to be done in terms of collecting asset management data on all categories of assets, including water.

Sampling Standards

As Mr. Greg Carreau (Department of Health) explained, Health Canada works closely with the provinces and territories to develop guidelines for Canadian drinking water quality. In January 2011, the Federal-Provincial-Territorial Committee on Drinking Water published a Public Consultation Document proposing to reduce the maximum allowable concentration (MAC) of lead in drinking water from 10 to 5 µg/L (micrograms per litre).

Throughout the course of the hearings, witnesses, including Ms. Michèle Prévost (École Polytechnique de Montréal), expressed support for Health Canada's proposed revised standard. However some witnesses, including the Canadian Waste and Wastewater Association explained that many utilities would be unable to adapt immediately to the new standard and consequently risked being deemed non-compliant by provincial regulators. Accordingly, Mr. Stephen Craik (EPCOR Utilities Inc.) proposed that any new guidelines should include an adjustment period for utilities.

Witnesses, including Mr. Craik, also pointed out that the outcomes of any lead monitoring program depend on "how samples are collected and tested, how many are collected, and when and where they are collected." Mr. Craik therefore stressed the



importance of clarifying sampling protocols and monitoring program requirements in Health Canada's new guideline.

Cost

Witnesses unanimously agreed that cost is a significant barrier to lead pipe replacement. While acknowledging that costs vary according to the local context of each replacement, the Federation of Canadian Municipalities informed the Committee that it typically costs \$5,000 to replace the private portion of a lead service line and \$10,000 to replace the public portion (the higher costs for the public portion relate to matters such as street restoration and traffic control). However, witnesses including Ms. Grenier explained that economies of scale can be realized if homeowners replace their portion of the lead service line at the same time as the municipality is replacing its portion.

Several municipalities, including Halifax and Welland, have already taken active steps to encourage homeowners to take advantage of these economies of scale. For example, Halifax offers to pay 25% of the cost of replacing the private portion of a lead service line and pre-clears certain contractors for recommendation to homeowners. Similarly, the City of Welland has introduced a homeowner assistance program that provides homeowners with up to \$1,500 towards lead service line replacement through a joint program with the Niagara Region.

In spite of these efforts, Mr. Iannello (City of Welland) told the Committee that only 10% of the privately owned portions of known lead service lines in Welland have been replaced.

Over and above cost barriers, Mr. Craik pointed out that many lead service lines are attached to rental properties where residents have very little control over pipe replacement.

Public Education and Awareness Raising

A number of witnesses also identified a lack of public awareness as a barrier to lead pipe replacement. Mr. Craik told the Committee that many property owners are surprised to learn that they own a portion of lead piping, and are generally reluctant to spend money to replace it. Ms. Grenier noted that some homeowners, particularly "more mature customers," are resistant to changing their lead pipes as they feel they are no longer at risk from the effects of lead exceedances.

Some witnesses were also concerned about the lack of awareness among water utilities. Mr. Yates informed the Committee that he believes lead in drinking water to be a more serious issue “than many utilities in Canada and their provincial regulators understand.”

Beyond traditional public education measures, several witnesses recommended engaging with provincial real estate associations to make information on lead piping available to potential home buyers at the time a house sale is being concluded.

CORROSION CONTROL

As Mr. Gagnon explained, corrosion control is a process whereby water utilities can chemically alter their water to minimize lead release. Although full lead service line replacement removes the largest source of lead, witnesses informed the Committee that corrosion control is still necessary to mitigate the risk from other sources, such as solder and brass. Indeed, Mr. Craik told the Committee that EPCOR’s random sampling program has shown that lead levels can sometimes exceed the guideline concentrations even in homes where there is no lead service line.

OBSERVATIONS AND RECOMMENDATIONS

The Committee recognises that drinking water distribution is an area of provincial responsibility. That said, in light of both the public health risks posed by lead in drinking water and the federal government’s responsibilities in relation to infrastructure, the Committee makes the following observations and recommendations.

Observations

(i) Homeowner Assistance

The Committee observes that many witnesses highlighted the importance of assisting homeowners with the cost of lead pipe replacement. It notes that several municipalities have grant and loan programs that help make such replacements more affordable. The Committee observes the benefits of these arrangements and encourages municipalities to further explore existing options and other innovative measures.

(ii) Public Education and Awareness

The Committee observes that many Canadians remain unaware of both the existence of lead service lines in their communities and the full extent of the health problems associated with lead exceedances. The Committee encourages municipalities to continue



exploring means of raising awareness, educating communities, and facilitating disclosure of the presence of lead piping.

Recommendations

The Committee recommends that the federal government work with the provinces, territories, municipalities and other stakeholders to address the public health problem of lead in drinking water and to accelerate the replacement of lead service lines. Priority measures should include:

- **Working with the Office of Infrastructure Canada and other partners to identify potential sources of funding for provinces and municipalities to address their specific corrosion control and lead piping replacement challenges.**
- **Working with First Nations communities to address their specific corrosion control and lead piping replacement challenges.**
- **Working with the provinces, territories and municipalities to harmonize the implementation of Health Canada's lead guidelines and testing protocols across Canada.**

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* ([Meetings Nos. 48, 63, 83, 85 and 86](#)) is tabled.

Respectfully submitted,

Hon. Judy A. Sgro, PC, MP
Chair



The Honourable Judy A. Sgro, P.C., M.P.
Chair of the House of Commons Standing Committee on
Transport, Infrastructure and Communities
House of Commons
Ottawa, Ontario K1A 0A6

Dear Ms. Sgro:

Pursuant to Standing Order 109 of the House of Commons, we are pleased to respond on behalf of the Government of Canada to the recommendations made in the Twenty-First Report of the Standing Committee on Transport, Infrastructure and Communities entitled *Lead in Drinking Water*, presented to the House on December 11, 2017.

The Government would like to thank the Committee for its work and express its appreciation to all who appeared before the Committee or provided the Committee with written submissions to share their views.

The Government Response accepts the Report's recommendations, acknowledges that the replacement of lead service lines is a legitimate public health concern, and affirms that Infrastructure Canada, Health Canada, the Department of Indigenous Services Canada, and the Canada Mortgage and Housing Corporation will continue to work with provinces, territories, municipalities and First Nations to address this issue.

Please find enclosed a copy of the Government Response to the recommendations of the Report.

Yours sincerely,

Amarjeet Sohi, P.C., M.P.
Minister of Infrastructure
and Communities

Ginette C. Petitpas Taylor, P.C., M.P.
Minister of Health

Jane Philpott, P.C., M.P.
Minister of Indigenous
Services

Enclosure

Canada

**GOVERNMENT RESPONSE TO THE TWENTY-FIRST REPORT OF
THE STANDING COMMITTEE ON TRANSPORT, INFRASTRUCTURE
AND COMMUNITIES ENTITLED
*LEAD IN DRINKING WATER***

The Government of Canada is pleased to respond to the Twenty-First Report of the Standing Committee on Transport, Infrastructure and Communities entitled *Lead in Drinking Water*, presented to the House on December 11, 2017. After carefully reviewing the Committee's report, the Government has chosen to respond to each recommendation individually.

CLEAN AND SAFE DRINKING WATER FOR CANADIANS

The Government recognizes the importance of access to clean drinking water for Canadians, as it is a basic necessity and fundamental to public health and quality of life. The Government also recognizes the effects that a lack of clean drinking water can have on a community's residents, including the significant impacts in First Nations communities. This is why access to clean and safe water is a critical part of the Government of Canada's historic plan to invest more than \$180 billion in infrastructure over 12 years. Of this, \$9.2 billion will be provided to provinces and territories over the next decade under the Green Infrastructure stream of the Investing in Canada Plan. This is also reflected in the 2016–2019 Federal Sustainable Development Strategy's long-term goal for Clean Drinking Water which reads: *All Canadians have access to safe drinking water and, in particular, the significant challenges Indigenous communities face are addressed.*

The Government of Canada commends the work that is already underway in many Canadian municipalities and First Nations communities across the country to support the removal and replacement of lead pipes in both public infrastructure and private and commercial properties. These local decision-makers are well-placed to know the unique needs of their communities; and by identifying these potential infrastructure projects to their respective provincial or territorial government for prioritization, they can ensure that their communities' needs are known and submitted under available funding programs.

RECOMMENDATIONS

Overall, the Committee recommends that *the federal government work with the provinces, territories, municipalities and other stakeholders to address the public health problem of lead in drinking water and to accelerate the replacement of lead service lines*. Specifically, the Committee recommends that three priority measures be addressed by the Government of Canada.

The Government of Canada supports this overall recommendation and is committed to working with all levels of government, First Nations communities, and stakeholders to address this public health issue. Addressing drinking water safety concerns is fundamental to ensuring Canadians have confidence in the quality of the water they drink.

The Government of Canada actively supports the efforts of provinces, territories, municipalities, and First Nations communities to replace public water service lines containing lead and support corrosion control in water treatment. The federal government will continue to pursue action in this regard as suggested by the Committee's report. In particular, the Government of Canada will pursue the three priority measures set out in the report.

Recommended Measure 1: Working with the Office of Infrastructure Canada and other partners to identify potential sources of funding for provinces and municipalities to address their specific corrosion control and lead piping replacement challenges.

The Government of Canada supports this recommendation. As addressed above, the Government of Canada recognizes access to clean drinking water for Canadians as a basic necessity and fundamental need for public health and quality of life. Modern and effective water and wastewater infrastructure is essential to keeping our communities healthy, and economically and environmentally sustainable.

While the Government of Canada does not generally have a direct responsibility for water service lines or water treatment, the Government provides ongoing funding and other support to provinces, territories, municipalities, and First Nations partners in this area across a number of fronts.

Drinking water infrastructure, including the replacement of lead pipes found in public infrastructure, has been an eligible category of investment under several past and current Infrastructure Canada programs, such as the Clean Water and Wastewater Fund, the New Building Canada Fund, the Building Canada Fund and the Gas Tax Fund. In particular, through the \$2-billion Clean Water and Wastewater Fund, over 1,100 drinking water projects have been approved in communities across the country.

The Canada Mortgage and Housing Corporation provides funding to provinces and territories that could be used to replace lead service pipes within a community housing project or on a property occupied by a low-income homeowner or tenant. The proposed updated Guideline for Canadian Drinking Water Quality for Lead, together with the existing Guidance on Controlling Corrosion in Drinking Water Distribution Systems, will form the basis for provincial, territorial, municipal, and First Nations communities' strategies for reducing exposure to lead from drinking water. Similarly, the Department of Indigenous Services Canada supports First Nations in providing safe drinking water

on reserve in areas such as supporting water treatment facility construction and associated funding for operation and maintenance in accordance with relevant federal and provincial standards and regulations, and drinking water quality monitoring in accordance with the Guidelines for Canadian Drinking Water Quality.

Looking ahead, the next decade will see over \$33 billion in new funding delivered through integrated bilateral agreements between the federal government and each of the provinces and territories under the Investing in Canada plan. Eligible public infrastructure investments will include infrastructure projects to support clean, safe drinking water where prioritized by provinces and territories.

The Government of Canada is committed to engaging with key stakeholders, such as provincial and territorial governments, the Federation of Canadian Municipalities, as well as First Nations communities to discuss options for addressing lead drinking water service lines.

In accepting the Committee's recommendations, Infrastructure Canada, the Department of Indigenous Services Canada and the Canada Mortgage and Housing Corporation will undertake coordinated engagement with provinces, territories, municipalities and First Nations communities in the coming months to ensure they have the most up-to-date information on existing federal funding opportunities and other support to address lead pipe replacement and corrosion control (water treatment) challenges. Health Canada will also support these engagement efforts by providing technical expertise on lead in drinking water issues. This collective effort will ensure Government of Canada resources and expertise are available to communities to support their access to clean and safe drinking water.

Recommended Measure 2: Working with First Nations communities to address their specific corrosion control and lead piping replacement challenges.

The Government of Canada supports the recommendation to work with First Nations communities to address their specific corrosion control and lead piping replacement challenges.

As part of its core mandate, the Department of Indigenous Services Canada supports First Nations in providing safe drinking water through funding for community infrastructure and public health activities. Federal funding and programming to support communities in the delivery of safe drinking water has been in place since the 1990s and has evolved over time to respond to emerging risks and changing science, technology and environmental contexts. Addressing issues with drinking water in First Nations communities is a priority for this government, as is shown through the commitment to and progress made in eliminating long-term drinking water advisories on reserve by March 2021. Between November 2015 when the commitment was made and February 6, 2018, 52 long-term drinking water advisories on public systems have been lifted and projects are underway that will benefit 275 First Nations communities.

Working with First Nations to address specific corrosion control and lead piping replacement challenges will take time. As owners and operators of water and wastewater systems in their communities, First Nations determine and prioritize their infrastructure needs in the context of other pressing infrastructure needs (e.g., housing, roads) through the Capital Facilities and Maintenance Program's First Nations Infrastructure Investment Plans. The Department then aligns the infrastructure needs of the communities with program criteria, priorities, and resources. Some First Nations have chosen to enter into Municipal Transfer Service Agreements with nearby municipalities to meet their drinking water and wastewater needs.

From a First Nations perspective, monitoring for lead and other drinking water quality parameters in accordance with the Guidelines for Canadian Drinking Water Quality and providing associated advice is a long-standing core activity for Environmental Health Officers, who are public health inspectors that deliver a range of public health activities in First Nations communities south of 60° as either federal or community employees. In British Columbia, these services have been transferred to the First Nations Health Authority. North of 60°, the territorial governments are responsible for safe drinking water in all communities in their territories.

The Department of Indigenous Services Canada is aware of and preparing for distribution and promotion of the proposed updated guideline for lead in drinking water and will be ready for monitoring of occupied schools and children's facilities in accordance with the new lead guideline. This approach is being taken because children are most at risk of being exposed to lead. Full implementation of the proposed updated lead guideline will take time and will be done in consultation with community leaders.

In support of these efforts, Budget 2016 announced \$1.8 billion over five years for water and wastewater infrastructure investments and \$141.7 million over five years for the Department of Indigenous Services Canada to improve monitoring and testing of on-reserve community drinking water systems, improve recruitment and retention of Community-Based Water Quality Monitors, and support increased monitoring, testing, public health engineering reviews and communication associated with increased infrastructure investments, including \$3 million for additional lead monitoring and educational activities within schools and other children's facilities. Budget 2017 announced \$4 billion in infrastructure investments for community infrastructure in First Nations communities, which includes funding that could be used for water and wastewater on-reserve. Capital Facilities and Maintenance Program funding could be used to support the construction, acquisition, renovation, expansion, repair and replacement of lead supply lines and distribution system piping.

The Department of Indigenous Services Canada will work with First Nations and municipalities, where relevant, to gather data to identify the approximate amount of lead piping on reserve. The Department of Indigenous Services Canada, together with Infrastructure Canada, will undertake coordinated engagement with First Nations partners in the coming months to ensure they have the most up-to-date information on federal funding opportunities and other support to address lead pipe replacement and corrosion control (water treatment) challenges. Health Canada will also support these engagement efforts by providing technical expertise on lead in drinking water issues.

Recommended Measure 3: Working with the provinces, territories and municipalities to harmonize the implementation of Health Canada's lead guidelines and testing protocols across Canada.

The Government of Canada supports this recommendation. Health Canada is committed to supporting provinces and territories as they move toward the adoption of the proposed updated Guideline for Canadian Drinking Water Quality for lead, while respecting their jurisdiction in this area. Meaningful discussions are ongoing with provinces and territories pertaining to the implementation of the proposed updated guideline, with an emphasis on the need to measure lead levels at the tap to provide a better representation of the exposure of Canadians.

Recognizing the challenges associated with the full removal of lead sources within distribution and plumbing systems, Health Canada is also providing guidance to provinces and territories on controlling corrosion, and on the possible use of residential treatment devices. The department has developed and posted public information (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/water-talk-minimizing-exposure-lead-drinking-water-distribution-systems.html>) on simple actions Canadians can take to reduce exposure to lead from drinking water until sources of lead are eliminated, and will further support provinces and territories to develop information specific to their jurisdiction.

Health Canada has developed a close collaborative relationship on the issue of drinking water with all provinces and territories through the Federal-Provincial-Territorial Committee on Drinking Water. This longstanding collaboration has resulted in the continued development and update of the Guidelines for Canadian Drinking Water Quality. Also, it is through this collaborative relationship that Health Canada will support provinces, territories and federal departments in the implementation of the proposed updated Guideline for Canadian Drinking Water Quality for lead. This support will include advice and guidance on testing protocols, scientific expertise on the human health assessment of lead, and the development of communication products for stakeholders, in collaboration with provinces, territories, and other federal departments.

CONCLUSION

The Government would like to thank the Committee for its work and express its appreciation to all who appeared before the Committee or provided the Committee with written submissions to share their views. The Government shares the Committee's commitment to safe and clean drinking water for all Canadians.



Gouvernement
du Canada

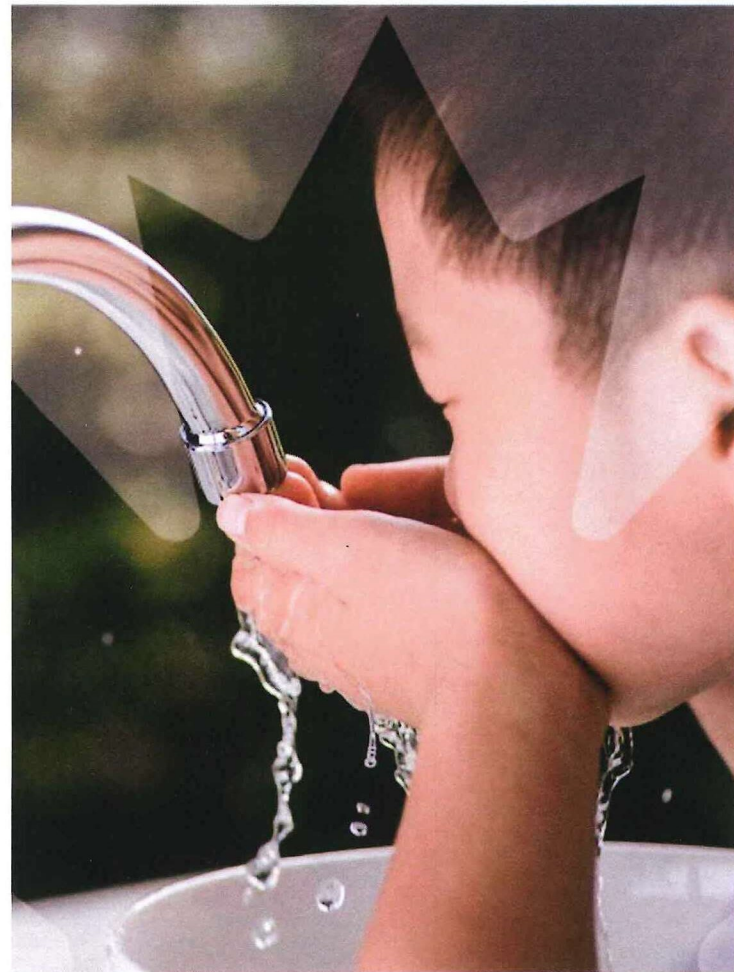
Government
of Canada

Federal Support for Lead Pipe Replacement and Corrosion Control

Canada

Lead in Drinking Water

- December 11, 2017 – the Twenty-First Report of the Standing Committee on Transport, Infrastructure and Communities entitled *Lead in Drinking Water* was tabled in Parliament.
- April 16, 2018 – Parliamentary tabling of the Government Response to the report that accepted all three recommendations and committed to associated action.



Report Recommendations

The Committee recommended three priority measures for the federal government to address the public health problem of lead in drinking water.

- **Recommended Measure 1:** *Working with the Office of Infrastructure Canada and other partners to identify potential sources of funding for provinces and municipalities to address their specific corrosion control and lead piping replacement challenges.*
- **Recommended Measure 2:** *Working with First Nations communities to address their specific corrosion control and lead piping replacement challenges.*
- **Recommended Measure 3:** *Working with the provinces, territories and municipalities to harmonize the implementation of Health Canada's lead guidelines and testing protocols across Canada.*

The Government Response agreed to act on all three recommendations.

Sources of Funding for Corrosion Control and Lead Piping Replacement

Infrastructure Canada:

- Infrastructure Canada provides funding for public infrastructure. Although none of this funding is specifically allocated for lead pipe replacement and/or corrosion control, the following funding (or portions of it) could be used for public infrastructure lead pipe replacement and water treatment projects.
- \$33 billion in new funding delivered through integrated bilateral agreements
 - Of this, \$9.2 billion will be provided to provinces and territories over the next decade under the green infrastructure stream of the Investing in Canada Infrastructure Program
- Over \$2 billion every year, through the Federal Gas Tax Fund, to 3600 communities across the country
- \$2 billion in funding through the Clean Water and Wastewater Fund

Sources of Funding for Corrosion Control and Lead Piping Replacement (Cont'd)

Indigenous Services Canada:

- The Capital Facilities and Maintenance Program allocates funding to First Nations for the construction and maintenance of community infrastructure on reserve.
- Funding is invested in four main areas: housing, education, water and wastewater systems, and other community infrastructure.
- The Program funds projects identified by First Nations in their capital plans (First Nation Infrastructure Investment Plans).
- Indigenous Services Canada's First Nation and Inuit Health Branch also provides funding for drinking water quality monitoring and provides public health-related advice to First Nations.

Sources of Funding for Corrosion Control and Lead Piping Replacement (Cont'd)

The Canada Mortgage and Housing Corporation (CMHC):

- Under the National Housing Strategy(NHS), the federal government, through CMHC, is allocating funds to provinces and territories, and offering each jurisdiction with the flexibility to design and deliver housing programs that result in improved housing outcomes for Canadians.
- As part of a NHS Federal-Provincial-Territorial Housing Partnership Framework, \$1.1 billion will be allocated to provinces and territories over eight years to address regional priorities related to housing affordability, repair and construction as well as \$4.3 billion over nine years to preserve, repair and expand community housing.
- Though no funding is earmarked for lead pipe replacement projects, provinces and territories could choose to use this funding to replace lead service lines within social housing units or other units occupied by low-income households.

Guideline for Canadian Drinking Water Quality for Lead

- Safe drinking water in Canada is a shared responsibility with provinces and territories (PTs).
 - Health Canada develops the scientific basis for the Guidelines for Canadian Drinking Water Quality.
 - PTs and federal government departments use the Guidelines as a basis to establish their requirements for drinking water quality.
- Health Canada is committed to supporting provinces and territories as they move toward the adoption of the proposed updated Guideline for Canadian Drinking Water Quality for Lead.
 - This support includes advice and guidance on testing protocols and approaches for controlling corrosion, and scientific expertise related to available water treatment strategies, including residential treatment devices
- All jurisdictions agree on the need to reduce exposure to lead and recognize the proposed updated guideline will take time to achieve.
- Until remaining sources of lead can be eliminated, there are simple actions Canadians can take to reduce exposure to lead in drinking water

[<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/water-talk-minimizing-exposure-lead-drinking-water-distribution-systems.html>].